

Notice of Allowability

Application No.

10/761,548

Examiner

Henry S. Hu

Applicant(s)

ORIANI ET AL.

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment of October 25, 2004.
2. ☒ The allowed claim(s) is/are 1-7.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

1. Applicants' amendment filed on October 25, 2004 was received. Claims 5 and 7 were amended, and no claim was added. To be more specific, Claim 5 was amended to delete the use of carboxylic acids, while Claim 7 was amended only to correct the wrong names of organic "salt". With respect to specification objection, the Applicants have corrected all informalities as suggested by the examiner; particularly the improper language of "a polycaprolactone" to "a polycaprolactone diol". In view of above amendment, the specification objection and claim objection of office action dated 7-22-2004 are now removed. **Claims 1-7 are pending now.**

2. Claim rejections under 35 USC 102 and 103 in the previous Office Action dated July 22, 2004 are now removed for the reasons given in paragraphs 3-9 thereafter.

Allowable Subject Matter

3. Claims 1-7 are allowed.

4. The following is an examiner's statement of reasons for allowance: The above claims 1-7 are allowed over the closest references:

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5. The limitation of **parent Claim 1** of present invention relates to **a process aid masterbatch composition** comprising: (A) **0.05-25 wt% of a fluoropolymer**; (B) **0.2-10 wt% of an organic soap selected from the group consisting of carboxylic acids and salts, hydrocarbon sulfates and salts**; (C) **at least 5 wt% of mineral particulate**; and (D) **a non-fluorinated melt processable polymer**. See other limitations of dependent **Claims 2-7**.

6. In view of the above-mentioned amendment, parent composition **Claim 1** of present invention still carry the same original limitation as a process aid masterbatch composition comprising “a fluoropolymer, an organic soap, mineral particulate and a non-fluorinated melt processable polymer” and each amount is as specified.

With respect to parent **Claim 1** in **102 rejection** for Claims 1-7, the reference **Priester** only discloses the preparation of **a polymer processing aid composition** comprising (A) a **fluoropolymer** having units of vinylidene fluoride and the like, and a **thermoplastic hydrocarbon non-fluorinated polymer** including polyolefin such as high-density polyethylene or linear low-density ethylene copolymer and the like. It is in the form of **masterbatch**. Although polymeric polar-side-group-containing extrusion adjuvants can be also included (column 3, line 14 – column 4, line 46), **Priester** fails to include the claimed organic soap and mineral particulate as well as the required amount as the Applicants have presented in detail on page 6 of Remarks. In fact, **Priester** teaches the **negative or interfering effect with the performance of fluoropolymer processing aids by using calcium stearate** and the like (see column 2, line 35-55).

7. With respect to parent **Claim 1** in **103 rejection** for Claims 1-7, the primary reference **Woods** only discloses the preparation of a polymer processing aid as a masterbatch composition comprising a fluorothermoplastic polymer, a thermoplastic hydrocarbon non-fluorinated polymer, a salt of carboxylic acid-containing polymer, and conventional fillers. Although **Woods** has used a salt of carboxylic acid-containing polymer, its function is quite different from the organic soap since the formation of micelle is difficult and may be impossible after a close examination on its chemical structure. Therefore, the reference is silent about specifically using the component (C) of small-molecule organic soap such as the claimed aliphatic C₆₋₃₄ carboxylic acids, sulfates and their salts. As discussed in above paragraph, **Priester et al.** teach away the use of the claimed **calcium stearate or zinc stearate** since they become interfering additives when it is included with fluoropolymer (column 2, line 35-55). Therefore, a new linking prior art is needed to fix the deficiency.

Additionally, the present invention has shown in examples along with some comparative examples for unexpected results in obtaining a process aid masterbatch composition comprising a fluoropolymer, an organic soap, mineral particulate and a non-fluorinated melt processable polymer (see pages 9-18 for **examples 1-3 along with its control example 1, and Tables I-VIII**). Therefore, all the above-mentioned references, in combination or alone, does not teach or fairly suggest limitations of present invention.

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8. After further examination and search, the examiner found the following prior art did not teach the claimed limitation:

USPG-PUB No. 2003/0100680 A1 to Oriani only discloses the preparation of a process aid package useful for extrusion processability of non-fluorinated melt-processable polymers; it comprises at least two unimodal fluoroelastomers having different Mooney viscosities (abstract, line 1-4; page 1, paragraphs 10-13). It is in the form of **masterbatch**. However, **Oriani fails to include the claimed organic soap and mineral particulate as well as the required amount**. Therefore, Oriani fails to teach or fairly suggest the limitation of present invention.

US Patent No. 5,132,368 to Chapman et al. only discloses the preparation of a fluoropolymer process aid useful for extrusion processability of non-fluorinated melt-processable polymers; it comprises **a fluoropolymer having “polar functional end groups” such as –COOM and –SO₃M** (abstract, line 1-12; column 2, line 34-68; column 4, line 30-68). It is in the form of **masterbatch**. However, **Chapman fails to include the claimed organic soap and mineral particulate as well as the required amount**. Therefore, Chapman fails to teach or fairly suggest the limitation of present invention.

9. The two key issues, the limitation on a process aid masterbatch composition comprising “a fluoropolymer, an organic soap, mineral particulate and a non-fluorinated melt processable polymer” and “each amount is as specified”, cannot be overcome by any or the combination of the above references, therefore, the present invention is novel.

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10. As of the date of this office action, the examiner has not located or identified any reference that can be used singularly or in combination with another reference including the above references to render the present invention anticipated or obvious to one of the ordinary skill in the art. Therefore, the independent and parent **Claim 1** is allowed for the reason listed above. Since the prior art of record fails to teach the present invention, the remaining pending dependent **Claims 2-7** are passed to issue.

11. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

12. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Henry S. Hu whose telephone number is **(571) 272-1103**. The examiner can be reached on Monday through Friday from 9:00 AM –5:00 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The fax number for the organization where this application or proceeding is assigned is (703) 872-9306 for regular communications.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Henry S. Hu

December 22, 2004


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